

inflammatory drug (NSAID) (meloxicam). For each cohort, use of prescription analgesics was tracked pre-withdrawal (January–September 2004) and post-withdrawal (2005–2006). The impact of the withdrawal on drug utilization by former rofecoxib users was assessed by comparing changes in their drug consumption with that of celecoxib or meloxicam users during the same time period. **RESULTS:** The study cohorts included: 29,438 rofecoxib, 34,937 celecoxib, and 7131 meloxicam users. The groups were demographically similar, except for a higher proportion of women in the meloxicam cohort. In 2005, former rofecoxib users primarily substituted other COX-2 inhibitors (22% celecoxib, 10% valdecoxib) or non-selective NSAIDs (which increased to 48% from 14% pre-withdrawal). There was no substantial change in use of opioid /other analgesics. The percentage of former rofecoxib users continuing to receive any prescription analgesic was 83% (2005) and 77% (2006). By comparison, overall utilization of celecoxib and meloxicam declined to 87% and 91% respectively in 2005 and 80% and 84% respectively in 2006. By 2006, 59% of celecoxib users and 53% of meloxicam users had discontinued these medications. **CONCLUSION:** By 2006, the proportion of former rofecoxib users who had discontinued prescription analgesics altogether was substantially higher than among patients who not previously receiving a COX-2 inhibitor. This suggests the potential harm from unsafe drugs may not be limited to side effects, but also includes the disruption of care due to withdrawal of effective treatment.

MUSCULAR-SKELETAL DISORDERS—Cost Studies

PMS6

BUDGET IMPACT ANALYSIS OF ABATACEPT INCLUSION FOR MODERATE TO SEVERE RHEUMATOID ARTHRITIS IN THE BRAZILIAN PUBLIC SYSTEM

Alves MR¹, Carvalho Jr F¹, Litalien G²

¹Bristol-Myers Squibb Pharmaceutical, Sao Paulo, Brazil, ²Bristol-Myers Squibb Pharmaceutical, Wallingford, CT, USA

OBJECTIVE: Abatacept is a new biological DMARD with selective co-stimulation modulator mechanism of action that was recently approved in Brazil for the treatment of patients with moderate to severe RA. We aim to evaluate and describe the budget impact of the inclusion of abatacept in the National Program of Exceptional Medications (NPEM) with the tumor necrosis factor (TNF) antagonists currently in use and included. **METHODS:** Using data provided by Brazilian Ministry of Health, our study estimates the cost associated with the inclusion of Abatacept for inadequate responders to methotrexate and TNF antagonists compared with actual scenario (without Abatacept). Our model presumes: adequate doses and regimen of abatacept (10 mg/kg, 0, 2, 4, and each 4 weeks), infliximab (4.2 mg/kg each dose of infliximab, 0, 2, 6, and each 8 weeks), etanercept (25 mg each dose/twice a week) and adalimumab (40 mg each dose, twice a month), and we accept the actual distribution of TNF antagonists used by NPEM (with adoption of 20% of increase in the number of the RA patients each year—NPEM data). According to literature, 30% of the patients with inadequate response to methotrexate will be eligible to use abatacept, and we accept this percentage to introduce patients in the abatacept group. The initial population is 4978 patients currently in use of TNF antagonists in 2007. **RESULTS:** In the first year of inclusion there is an increase in costs of R\$3,085,711 (US\$1,763,263). In the second and third years there are significant savings on budgets, R\$97,593,971 (US\$55,767,983) and R\$129,458,357 (US\$73,976,204), respectively. **CONCLUSION:** The incorporation of abatacept into the NPEM is cost-saving to

the Brazilian Public Health System, saving R\$129,458,357.00 (US\$73,976,204) after the third year.

PMS7

TREATMENT OF DISPLACED FEMORAL NECK FRACTURES IN THE ELDERLY: A COST BENEFIT ANALYSIS

Alolabi B¹, Bajammal S², Shirali J², Karanicolas PJ¹, Gafni A², Bhandari M²

¹University of Western Ontario, London, ON, Canada, ²McMaster University, Hamilton, ON, Canada

OBJECTIVE: To conduct a cost-benefit analysis to compare the hypothetical introduction of a new intervention, internal fixation (IF), with hemiarthroplasty (HA) for the treatment of displaced femoral neck fractures in patients greater than 60 years old. **METHODS:** We estimated the costs from a third party payer perspective after one year of two strategies (HA and IF) for the treatment of femoral neck fractures in patients over the age of 60. Using a decision board, we elicited patient preferences for the two operative approaches and calculated the net benefit using the willingness-to-pay technique. **RESULTS:** The 1-year projected cost of one IF was \$18,100 and that of one HA was \$15,843 (incremental cost of \$2,257 for each IF). Of 108 participants, 61 (56.5%) chose IF as the preferred treatment option and were willing to pay an average of \$3.33 per month to have this option available if needed. In Ontario, the total incremental cost of performing IF in patients that choose it was \$64,714,103, and the total societal benefit was \$289,263,600, yielding a net benefit of \$224,549,497. **CONCLUSION:** The benefits of IF over HA outweigh the incremental costs from the perspective of a third party payer. Therefore, IF should be available to patients that choose it.

PMS8

HEALTH ECONOMICS MODEL FOR TOTAL HIP ARTHROPLASTY: COST SAVINGS ACHIEVED BY NEWER TECHNOLOGY

Peoples S¹, Rizzo J², Kotlarz HJ¹

¹DePuy Orthopaedics, Warsaw, IN, USA, ²Stony Brook University, Stony Brook, NY, USA

OBJECTIVE: Total hip arthroplasty (THA) is a common and successful procedure with nearly 250,000 primary arthroplasties performed yearly in the United States. This number is estimated to increase by at least 5% annually over the next decade. The resulting growth in health care utilization and costs maybe offset by innovative implant technologies with increased survivorship. This study quantifies the economic cost savings to payers from improved survivorship. **METHODS:** A simulation model is developed to estimate the long-term cost implications of improvements in THA survivorship. The model considers costs associated with all primary hip replacements performed in the United States over a ten-year horizon. The analysis draws upon the literature to obtain information on long-term revision rates for hip replacement surgeries. Inpatient treatment costs associated with THA and incidence and costs of the major complications, deep vein thrombosis and infection are included in the model. **RESULTS:** Improved implant survivorship in THA is estimated to save \$1.6 billion over a ten-year horizon. The majority of these savings accrues from lower revision rates (\$1.3 billion) with fewer complications accounting for \$300 million in additional savings. Sensitivity analyses reveal that cost savings varied by survivorship (\$1.1 to \$2.0 billion) and hospital cost for revision surgery (\$1.3 to \$3.1 billion). Other variations by physician costs, complications costs and discount rates are less pronounced. However, under every scenario, costs savings are in